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VOCATIONAL TRAINING IN ANTIQUITY

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The subject of vocational training in the ancient world of Greece and Rome has received very little attention from writers upon ancient educational practice and theory. This has been due chiefly to the fact that the ancient writers whose works have come down to us paid little attention to craftsmen and the lesser tradesmen of their social order. Furthermore, a conventional attitude toward manual labor and skilled labor was established by the political theorists Plato and Aristotle, which maintained itself traditionally throughout the history of ancient philosophic literature. This was the idea that all forms of manual labor and retail trade were "banausic." The classic presentation of this attitude is to be found in Xenophon *Economist* iv. 3, where Socrates says:

The so-called banausic [mechanical] arts have a bad name, and quite reasonably they are in ill repute in the city-states. For they ruin the bodies of those who work at them and those who oversee them. They compel these men to remain seated and to work in gloomy places, and even to spend entire days before a fire. While their bodies are being enervated, their souls, too, are becoming much enfeebled. More especially, also, the banausic arts offer men no leisure to devote to their friends or to the state, so that such men become base in relation to their friends and poor defenders of their fatherland. And so in some of the cities, especially in those which are considered to be strong in war, no citizen is permitted to work at any banausic craft.

This paragraph is characteristic of a number which might be cited from Plato and Aristotle, as well as from Xenophon. The explanation of this attitude of the Greek philosophers is clearly marked in the foregoing passage. The Greek city-state was founded upon the idea of a citizen militia of small landholders, men who owned and worked their own farms. Agricultural labor was never regarded by the theorists with the same scorn as the trades, because outdoor life fitted men for military service. The industries,

on the other hand, unfitted them for the defense of the state, which was the chief and first obligation of citizenship. This philosophic convention as to the "banausic" trades is repeated through the centuries and determines the supercilious attitude toward labor even in the works of Cicero. That it was nothing more than a convention is proven by the great interest which Plato shows in these very trades. A great number of his similes are taken from the lives of tradesmen. Moreover, a large number of the citizens of a state like Athens were of these very craftsmen classes. We must never lose sight of the fact that the great political-philosophic literature of Greece is generally reactionary and anti-democratic. Our own common-sense, moreover, must tell us that the political theory of the fourth century B.C. and the practical situation were widely divergent. For the Greek world had long been developing toward urban life and industrial centers in which manufacturing was along fairly well-specialized lines. In the manufacturing industries free and slave labor were used side by side and the former was never eliminated by the encroachments of the latter.¹

Statistics are seldom available for the study of conditions in the ancient world. Where they are to be gathered they scarcely suffice for drawing trustworthy conclusions. We can say only that from 500 B.C. onward the Greek-Hellenistic society of the Mediterranean world was increasingly an industrial urban society. Where and how did its large industrial class obtain the specialized training for these trades, whether the workmen were free or slave? Freeman, in his *Schools of Hellas*,² touched upon ancient industrial training; but he failed to make use of new material available when he was preparing his book. The method of industrial training, as Freeman implies, was the apprentice system. The new edition of the *Encyclopaedia Britannica*, however, in its article upon "Apprenticeship" makes the following statement: "So far as can be seen, it [the system of apprenticeship] arose in the Middle Ages." It has seemed worth while, therefore, to sum up briefly the results

¹ The correct point of view concerning ancient industrial conditions is to be gained from two pamphlets of the great German historian, Eduard Meyer. They are: *Die Sklaverei im Altertum*, Dresden, 1898; and *Die wirtschaftliche Entwicklung des Altertums*, Jena, 1895.

² Kenneth J. Freeman, *Schools of Hellas*, pp. 44-46, London, 1907.

of the study of materials recently discovered which throw some light upon the only education enjoyed by a large percentage of the people of the ancient world. The information is taken from the writer's paper which recently appeared in *Classical Philology*.¹

The new material upon apprenticeship has come in the form of papyri which are at present being discovered in great numbers in the graves and ruins of ancient Egyptian cities of the period of the Ptolemaic-Greek and Roman domination. The Macedonian dynasty of the Ptolemies ruled Egypt from the death of Alexander the Great in 323 B.C. until the suicide of the able Queen Cleopatra in 31 B.C. It remained a part of the Roman Empire until wrested from the control of the Eastern emperors by the Arabian-Mohammedan onslaught in the seventh century of the Christian era. Throughout this millennium of history the official language of Egypt was the Greek. In the last three centuries B.C. thousands of Greeks and Macedonians emigrated from their native lands to take service in the armies and bureaucratic service of the Ptolemies. They intermarried with the native Egyptians, for whom they felt no racial antipathy. The result was a hybrid Greco-Egyptian people. In this hybrid population the native Egyptian element greatly predominated; but the culture of the land was nevertheless essentially Greek. Even the million or more Jews resident in Egypt, who did not intermarry with the Gentiles, spoke and wrote the Greek language and were "hellenized" to the point of forgetting their own Hebrew tongue.

In their public and private life all these peoples who made up the heterogeneous population of Egypt used a paper made of the pith of the papyrus reed. The pith was cut into thin strips, usually about sixteen or eighteen inches in length and a quarter of an inch in width. Out of these strips, one layer laid lengthwise and another crosswise, sheets of a highly durable paper were made. The surfaces were smoothed off with pumice-stone and were then ready for use. The ink used was a natural, or vegetable, ink. The pens were goose quills. The language used was chiefly Greek, although we have a smaller number of papyri written in demotic Egyptian and

¹ W. L. Westermann, "Apprentice Contracts and the Apprentice System in Roman Egypt," *Classical Philology*, IX, 295 ff.

a considerable number written in the Coptic, or later Egyptian, dialect and script.

After a piece of paper had been written upon on both sides and the matter it contained, whether it be a tax-receipt, an official or private letter, a contract of marriage or of sale, or what not, had served its purpose, it would be used for about the same sort of service as those for which we employ old newspapers, except for starting fires. The papyrus was too expensive and the Egyptians too thrifty to permit any such waste. Some of the uses of waste paper were peculiar to the country and its customs. For example, one great source of the papyri is the ancient cemeteries. In these the papers are found wrapped around the mummified bodies of men and women and of the animals regarded as sacred in the various nomes. In one place it may be the household cat; in another the coyote, or desert fox; again the ibis; in another nome the crocodile. Only a few continuous rolls, or parts of books, have been found stowed away in jars in the ruins of houses. About fifteen years ago an English archaeologist, Mr. Flinders Petrie, made the important discovery that a number of the coffins, or sarcophagi, were made of old papers pasted together and pressed into a fairly solid mass. The mucilage of these paper sarcophagi has been chemically decomposed and many important papyri were thus recovered. Probably the most important sources of the papyri are the great rubbish heaps of the ancient cities. For hundreds of years the material from these refuse heaps have been used by the fellaheen of Egypt as manure for their fields. In this manner they have destroyed countless documents which would have been of the greatest interest to scholars today. At present the Egyptian peasant knows the commercial value of these bits of paper and saves them for sale to the agents of the European museums or to some private collector, like the late J. Pierpont Morgan. The papyri are being deciphered and published very rapidly by a corps of well-trained and capable scholars, chiefly English, German, and French.

Included in the papyri already published are nine contracts of apprenticeship, the earliest from the year 18 B.C., the latest from the third century of our era. These do not include a number of

contracts in which the labor of free boys or of slaves is bonded out in payment of the interest upon a debt contracted by the legal guardian of the boy or owner of the slave. In these documents the labor of the boy is regarded as security for the loan as well as the interest upon the debt. In some contracts of this type the creditor agrees, just as in the apprentice contracts, to teach the boy his trade. From the educational standpoint, therefore, this latter form must be treated as a part of the system of industrial training. Of the nine pure apprentice contracts which we have, five are for the weaving trade, and one each for apprenticeship in nail-making, flute-playing, shorthand writing, and hairdressing.¹ Another document of a different type shows that the teaching of the reading and carving of Egyptian hieroglyphs was also carried on by apprenticeship. The educational significance of these documents is emphasized by the Greek terms used to distinguish the master-workman and the apprentice. They are *didaskalos* and *mathetes*, which are literally translated as "teacher" and "pupil."

Perhaps the best method of presenting my conclusions will be to give a translation of a characteristic contract and follow it with a summary of my results. Oxyrhynchus Papyrus, No. 725,² is an apprentice contract made out in 183 A.D., under the rule of the Roman emperor Commodus. It reads as follows:

Ischyron, son of Heradion and . . . , of Oxyrhynchus son of Sarapion also called Leon, son of Heraclides, his mother being . . . , of the said city, weaver, agree with each other as follows: Ischyron on the one part that he has apprenticed to Heraclas . . . Thonis, a minor, to be taught the art of weaving for a period of five years starting from the first of next month, Phaophi, and will produce him to attend the teacher for the stipulated period every day from sunrise to sunset, performing all the orders that may be given to him by the said teacher on the same terms as the other apprentices, and being fed by Ischyron. For the first two years and seven months of the third year Heraclas shall pay nothing for the boy's wages, but in the remaining five months of the said third year Heraclas shall pay for the wages of the said apprentice 12 drachmae a month, and in the fourth year likewise for wages 16 drachmae a month, and in the fifth year likewise 24 drachmae a month; and Heraclas shall furnish for the said apprentice in the present twenty-fourth year a tunic worth

¹ The references will be found in my detailed study of the apprentice system in *Classical Philology*, IX, 295 ff.

² Grenfell and Hunt, *Oxyrhynchus Papyri*, IV, London, 1904.

16 drachmae, and in the coming twenty-fifth year another tunic worth 20 drachmae, and likewise in the twenty-sixth year another tunic worth 24 drachmae, and in the twenty-seventh year a tunic worth 28 drachmae, and likewise in the twenty-eighth year another tunic worth 32 drachmae. The boy shall have twenty holidays in the year on account of festivals without any deduction from his wages after the payment of wages begins; but if he exceeds this number of days from idleness or ill health or disobedience or any other reason, Ischyriion must produce him for the teacher during an equivalent number of days, during which he shall remain and perform all his duties, as aforesaid without wages, being fed by the said Ischyriion because the contract has been made on these terms. Heraclas on the other part consents to all these provisions, and agrees to instruct the apprentice in the aforesaid art within the period of five years as thoroughly as he knows it himself, and to pay the monthly wages as above, beginning with the eighth month of the third year. Neither party is permitted to violate any of the aforesaid provisions the penalty for such violation being a fine of 100 drachmae to the party abiding by the contract and to the Treasury an equal sum. This agreement is valid. The twenty-fourth year of the Emperor Caesar Marcus Aurelius Commodus Antoninus Augustus Armeniacus Medicus Parthicus Sarmaticus Germanicus Maximus, Thoth 25.

[2d hand.] I, Heraclas, son of Sarapion, also called Leon, have made this contract and consent to all the aforesaid provisions. I, Thonis, also called Morous, son of Harthonis, wrote for him as he was illiterate.

The signature of Heraclas is needed to make the document legal. All the weavers who occur in these contracts are illiterate. Their names are therefore signed by some friend or a scribe, according to the regular form which appears above. The master-workman or teacher is usually the signatory party to these contracts. This implies that *he* is the party chiefly obligated; and, as will be seen above, his obligation is to *teach his trade* to the boy.

My conclusions, on the basis of the entire set of apprentice contracts, are as follows:

There was no set term of apprenticeship. In the weaving contracts the years of the apprenticeship vary from one to five. The normal period of preparation for the apprentice, before he was regarded as proficient enough to become an apprentice wage-earner or an independent skilled laborer, was apparently two or three years. In the contract cited above, for example, the boy, Thonis, began to receive pay after two years and seven months of training. The apprentices lived and took their meals at home,

although the teacher usually made a certain payment to the father, guardian, or owner of the boy for food and clothes. These arrangements vary somewhat, according to the nature of the agreement, which was evidently settled partially by custom and partially by the bargaining ability of the two contracting parties.

Holidays are stipulated in advance. The weaver's apprentice, Thonis, was allowed only twenty days during the year. Recalling that the Egyptians of this time had no Sabbath, it is evident that the apprentice remained pretty well "on the job," as we say. The teacher is protected from "cutting" on the part of the pupil by the provision that the apprentice must serve without pay as many days after the end of the apprentice period as he may have lost during the period, from any reason whatsoever, except for the stipulated holidays. In some of the contracts an option is given to the father, guardian, or owner of the apprentice, either of making up the days lost or of forfeiting one drachma a day for each day he did not appear. A drachma a day was big money in those days. Evidently the lad would be compelled to make up the time.

The age of entering upon apprentice training was difficult to determine. All of the free-born apprentices are called "minors," *aphelikes* in the Greek. Unfortunately we do not know, as yet, what the age of legal majority was in Egypt. I was able, however, to determine the usual age of beginning a boy's vocational training by noting, in two cases, that the apprentices paid the poll-tax in the second year of their training. The age for beginning the payment of the poll-tax is definitely known to have been fourteen. The apprentice training, therefore, began at about the age of thirteen. This conclusion is supported by other bits of evidence, which would not have been conclusive in themselves.

There is evidence that the master-workmen sometimes had a number of apprentices working under their direction at one time, as is implied in the contract cited above in the words "on the same terms as the other apprentices." There is nothing to indicate how many there were. There is no evidence that the guilds of the weavers, hieroglyph-carvers, shorthand writers, etc., attempted to regulate the apprentice system, either in its industrial or in its educational aspects. There is also no evidence that the state

regulated apprenticeship in any way, except to demand the list of apprentices for the collection of the trade license. Several of the contracts include the stipulation of a fine to be imposed upon either party to the contract who may be guilty of breach of contract. In the document quoted above, this payment is an equal amount to the party injured and to the state. This, however, is nothing more than a conventional penalty found in many types of contracts, which asserts the authority of the state behind the contractual agreement and the necessity of its fulfilment. The conclusion that there was no state regulation of apprenticeship is supported by the fact that no evidence of statutes upon this subject is to be found in the Code of Justinian. The conclusion is, therefore, obvious that there was *no state system of industrial training*.

Professor Ulrich Wilcken, of Bonn, who is undoubtedly the leading authority upon the papyri, has attempted to establish two distinct types among the apprentice contracts, calling the one type *Lehrverträge* or "teaching contracts," the other *Lehrlingsverträge*, or pure "apprentice contracts."¹ In the first type, which includes the contracts for instruction in flute-playing and in shorthand writing, the teacher receives pay for imparting his knowledge. In the second type, which includes contracts for instruction in weaving, nail-making, and hairdressing, the labor of the apprentice seemed to Wilcken to be the decisive factor, and the teacher pays for this labor in addition to undertaking the obligation of teaching his trade. The writer was not able to follow Wilcken in this attempted division of the apprentice contracts, especially for the reason that the ancients made no such distinction as we do between "professions" and "trades." To them the work of sculptors, shoemakers, doctors, weavers, musicians, hairdressers, are alike called *technai*, which is best translated by our own word "trades." The only real distinction which I could find between the so-called "teaching contracts" and the "apprentice contracts" lies in one fact. That fact is purely an economic one. The apprentice of the flute-player and the shorthand writer is in no way useful to his teacher until he has acquired such skill in the trade that he can as

¹ In Mitteis-Wilcken, *Grundzüge und Chrestomathie der Papyruskunde*, I, 1, p. 261, Leipzig, 1912.

an independent workman earn money for his master, natural or artificial guardian, as the case may be. For this reason the teacher, or master-workman, receives pay for his instruction. With the apprentice of the weaver, hairdresser, or nail-maker the case is different. From the outset the apprentice is economically useful about the shop. Therefore the master-workman is willing to pay for the food and clothing of the apprentice from the beginning of his apprenticeship, with the addition of wages which may increase as the skill of the apprentice increases, as in the contract given in full in this article.

There is but one statement in the contracts which have been found, up to the present time, of any form of examination of the apprentice at the end of the period of his apprenticeship to determine the efficiency of his training. That is in the mutilated agreement upon flute-playing,¹ where the contract provides for an examination at the end of the period of training by three men who are themselves proficient in the trade. The contract upon shorthand writing,² however, seems to imply some similar form of test, occurring twice during the two years of training which are stipulated in the agreement. The owner of the slave who is to be taught by the shorthand writer agrees to pay the teacher 120 drachmae, "of which sum you have received the first instalment amounting to 40 drachmae, and you will receive the second instalment consisting of 40 drachmae when the boy has learned the entire *commentary*, and the third you will receive at the end of the period when the boy writes fluently in every respect and reads faultlessly." It is clear that the course of instruction in shorthand writing has two separate phases. In the first period the boy is mastering the "commentary." The Greek word in the text, *kommentarion*, is a translation of the Latin word *commentarium*. This means a set of notes constructed by the teacher through which the pupil gets his knowledge of the shorthand signs. Since it is clearly stipulated that the second payment is to be made when he has worked this through, there must have been some form of test to prove that he

¹ B.G.U. (*Aegyptische Urkunden aus der königlichen Museen zu Berlin*), IV, No. 1125, Berlin, 1910.

² Grenfell and Hunt, *Oxyrhynchus Papyri*, IV, No. 724.

had mastered the elements as taught in the *commentarium*. The second period of the training is given over to the practice of reading and writing shorthand. It, too, implies some form of examination in order to satisfy the owner of the slave boy that he actually can read and write fluently. I judge that this test was conducted in somewhat the same manner as that for the flute-player's pupil.

That some form of books and tools were necessary for the training of apprentices goes without saying. The necessity for proper instruments and tools is emphasized in several remarks in Plato's dialogues, as in the *Republic* 421 E.: "And surely if a craftsman because of poverty cannot supply tools and other requisites for the trade, the work will be rather poor and his sons or others whom he may be teaching will be poorly taught workmen."

The continuation of the study of apprenticeship backward into the pre-Grecian period showed that the system existed from the earliest period. Out of the time of the restored Babylonian kingdom contracts are extant, in the form of cuneiform tablets, for instruction in weaving, baking, stonecutting, and fulling cloth and for other trades not yet recognized.¹ For Egypt under the Pharaohs the system is assured for the training of scribes. The Code of Hammurabi, of the twentieth century B.C., regulates the relation of apprentice and teacher under a form of legal adoption of the former by the latter. Throughout antiquity the tendency toward the inheritance of a trade from father to son is quite marked. It is fairly probable and certainly to be hoped that the Egyptian excavations will bring to light more apprentice contracts which will further broaden our knowledge of this interesting and vital phase of ancient life.

¹ C. H. W. Johns, *Babylonian and Assyrian Laws, Letters, and Contracts*, pp. 181-82, Edinburgh, 1904.